

FUNCTIONAL FIT TEST -- NEGATIVE PRESSURE TEST

Purpose

This Negative Pressure Test checks the presence and functioning of the respirator exhalation valve as well as potential leakage due to improper cartridge seal or respirator/face fit. This test is performed to help the wearer assess respirator function and to find gross leaks between the face and the face piece. OSHA standards [29 CFR 1910.134 (E) (5) (I)] require this negative pressure test or a positive pressure test prior to use of any respirator in a contaminated or potentially contaminated atmosphere.

Procedure

1. Obtain two disposable latex gloves or other soft flexible impervious material.
2. Block off the respirator cartridge inlet openings with the gloves or palms of hands. If using hands, be careful not to press too hard on the face piece, as it will artificially improve the seal.
3. Inhale gently, holding that negative pressure for at least 5 seconds.
4. If no inward leakage of air is detected, the person has passed the test.
5. If leakage is detected (usually felt as a cool sensation against the skin or a loss in pressure) either the respirator is malfunctioning or a gross leak exists between the face and face piece.
6. If a failure occurs:
 - a. Redon or readjust the respirator.
 - b. If the face piece continues to lose pressure – even if previous positive or negative pressure tests performed with that respirator were passed -- it is probably malfunctioning. Consult the supervisor. It is also possible for new scars, wrinkles, beard growth, missing teeth or dentures, significant weight gain or loss, etc. to cause gross leakage into the face piece. When such a new condition exists, re-evaluate the respirator fit through exposure to a test atmosphere.
 - c. If the person is selecting a respirator before it has been qualitatively fit tested and if the positive or negative pressure test is a failure, a gross leak is probably present between the face and the face piece. Another respirator brand or size should be chosen.